

CLAIMS

We Claim:

- 1 1. A proprietary information utility comprising:
 - 2 an interface that provides outside entities connection to the
 - 3 proprietary information utility;
 - 4 a repository that contains proprietary information, wherein the
 - 5 repository is compartmentalized by user identity and entitlement, so that a
 - 6 first category of proprietary information is within private domains available
 - 7 to only a single user and a second category of proprietary information is
 - 8 within domains to which multiple users may be granted use in response to
 - 9 acquiring a license to use particular proprietary information within the
 - 10 second category of proprietary information;
 - 11 application services;
 - 12 a security system, that limits access of each user connecting to the
 - 13 proprietary information utility to proprietary information to which each
 - 14 user is entitled, the proprietary information to which each user is entitled
 - 15 being accessed through use of the application services; and,
 - 16 a billing system for tracking usage by users of the proprietary
 - 17 information utility for billing purposes.
- 1 2. A proprietary information utility as in claim 1 wherein the second
- 2 category of proprietary information includes decision support software.

1 3. A proprietary information utility as in claim 1 wherein the
2 application services include services to perform at least one of the following
3 activities related to patents:
4 help identify patentable ideas;
5 create patent disclosures;
6 manage pending patents;
7 manage research logs; and,
8 research existing patents.

1 4. A proprietary information utility as in claim 1 wherein the
2 application services include at least one of the services listed below:
3 decision support software;
4 software for troubleshooting products;
5 system configuration services;
6 diagnostic services;
7 planning services;
8 selection services;
9 authoring tools that help authors generate appropriate software
10 models;
11 learning services for data-mining and the ongoing evolution of
12 models;
13 business intelligence services;
14 version management services;
15 presentation services;
16 brokering services;

17 stock selection services;
18 investment portfolio troubleshooting services;
19 investment portfolio selection services;
20 services to troubleshoot devices;
21 medical diagnosis services;
22 services that predict failure and behavior;
23 purchasing decision services;
24 consulting services;
25 skills gap analysis services;
26 translation services for translating decision support models from one
27 underlying technology to another;
28 enterprise resource planning services; and,
29 customer relationship management services.

1 5. A proprietary information utility as in claim 1 wherein the first
2 category of proprietary information contains health records and the
3 application services include services to provide services for supporting
4 healthcare and patients, without revealing private information.

1 6. A proprietary information utility as in claim 1 wherein the second
2 category of proprietary information includes proprietary information within
3 at least one of the areas listed below:
4 decision support models; and,
5 models associated with troubleshooting products;

1 7. A proprietary information utility as in claim 1 wherein the second
2 category of proprietary information includes decision support models that
3 are based on at least one of the technologies listed below:
4 Bayesian networks;
5 neural networks;
6 case-based systems;
7 model-based systems;
8 rule-based systems;
9 fuzzy systems;
10 decision trees;
11 genetic algorithms;
12 Monte Carlo Markov chains;
13 clustering algorithms;
14 Monte Carlo optimization;
15 simulated annealing;
16 pattern matching;
17 influence diagrams;
18 online analytical processing;
19 collaborative filtering;
20 linear programming;
21 machine learning; and,
22 time series.

1 8. A proprietary information utility as in claim 1 wherein the
2 interfaces allows users to connect to the proprietary information utility
3 using at least one of the following deployment channels:

4 wireless network;

5 cellular phones;

6 internet sites;

7 applications embedded in appliances;

8 applications embedded in devices;

9 applications embedded in vehicle communication and information
10 systems;

11 applications embedded in intelligent agents; and,

12 applications embedded in memory modules.

1 9. A proprietary information utility as in claim 1 wherein the
2 application services include services to support the creation, maintenance,
3 and deployment of decision support models, in at least one of the following
4 areas:

5 data-mining;

6 usage reports;

7 business intelligence reports;

8 adaptive learning and refining of models;

9 authoring wizards particular to specific horizontal and vertical
10 industries; and,

11 quality benchmarks of models.

1 10. A proprietary information utility as in claim 1 additionally
2 comprising:

3 an application service registry that manages dynamic registration,
4 access, use, and disposal of the application services.

1 11. A proprietary information utility as in claim 1 additionally
2 comprising:

3 a proprietary information broker that maps semi-structured
4 proprietary information requests to a most appropriate proprietary
5 information model and application services that will operate on the most
6 appropriate proprietary information model.

1 12. A proprietary information utility as in claim 1 wherein the
2 security system provides non-repudiation services in support of billing and
3 reporting

1 13. A proprietary information utility as in claim 1 wherein the
2 security system provides privacy for all information transmitted outside of
3 the proprietary information utility, allowing proprietary services to make
4 use of proprietary information utility without revealing anything about
5 users of the proprietary services and without revealing contents of data
6 moving between services.

1 14. A proprietary information utility as in claim 1 wherein the billing
2 system provides revenue to be generated using at least one of the following

3 pricing schemes:
4 pay-per-use micro-transactions;
5 vendor-visible service-based pricing;
6 hybrid flows;
7 subscription-based pricing; and,
8 price bundling.

1 15. A proprietary information utility as in claim 1 additionally
2 comprising:
3 a scaleable computing engine that runs services across many pieces
4 of information.

1 16. A proprietary information utility as in claim 1 additionally
2 comprising:
3 a computing engine, the computing engine being used to translate
4 information from an author into a utility-native proprietary information
5 format that can be used by a least a subset of application services within the
6 proprietary information utility.

1 17. A proprietary information utility as in claim 1 wherein the billing
2 system calculates royalty payments due to authors when proprietary
3 information of the authors is used by the application services within the
4 proprietary information utility.

1 18. A proprietary information utility as in claim 1 additionally
2 comprising an application service registry that manages dynamic
3 registration, access, use, and disposal of the application services, the
4 application service registry providing a service catalog, a discovery
5 mechanism, and a brokering interface that links with the proprietary
6 information broker and the security system to provide a custom view of
7 available application services; based on entitlement and visibility.

1 19. A method comprising the following steps:
2 (a) providing outside entities connection to a proprietary information
3 utility;
4 (b) storing proprietary information within a repository, wherein the
5 repository is compartmentalized by user identity and entitlement;
6 (c) limiting access of each user connecting to the proprietary
7 information utility to proprietary information to which each user is entitled,
8 the proprietary information to which each user is entitled being accessed
9 through use of application services operating within the proprietary
10 information utility, wherein multiple users can be granted access to the
11 same proprietary information; and,
12 (d) tracking usage of users of the proprietary information utility for
13 billing purposes.

1 20. A method as in claim 19 additionally comprising the following
2 step:

3 (e) managing dynamic registration, access, use, and disposal of the
4 application services.

1 21. A method as in claim 19 additionally comprising the following
2 step:

3 (e) mapping semi-structured proprietary information requests to a
4 most appropriate proprietary information model and application services
5 that will operate on the most appropriate proprietary information model.

1 22. A method as in claim 19 wherein step (c) includes providing non-
2 repudiation services in support of billing and reporting

1 23. A method as in claim 19 wherein step (c) includes providing
2 privacy for all information transmitted outside of the proprietary
3 information utility, allowing proprietary services to make use of proprietary
4 information utility without revealing anything about users of the proprietary
5 services and without revealing contents of data moving between services.

1 24. A method as in claim 19 wherein step (d) includes providing
2 revenue to be generated using at least one of the following pricing schemes:
3 pay-per-use micro-transactions;
4 vendor-visible service-based pricing;
5 hybrid flows;
6 subscription-based pricing; and,
7 price bundling.

1 25. A method as in claim 19 additionally comprising the following
2 step:

3 (e) translating information from an author into a utility-native
4 proprietary information format that can be used by a least a subset of
5 application services within the proprietary information utility.

1 26. A method as in claim 26 wherein step (d) includes calculating
2 royalty payments due to authors when proprietary information of the
3 authors is used by the application services within the proprietary
4 information utility.

1 27. A method as in claim 19 additionally comprising the following
2 step: (e) providing a service catalog, a discovery mechanism to provide a
3 custom view of available application services, based on entitlement and
4 visibility.

1 28. A method comprising the following steps:
2 (a) providing outside entities connection to information within a
3 proprietary information utility;
4 (b) storing proprietary information within a repository, wherein the
5 repository is compartmentalized by user identity and entitlement;
6 (c) limiting access of each user connecting to the proprietary
7 information utility to proprietary information to which each user is entitled,
8 the proprietary information to which each user is entitled being accessed

9 through use of application services operating within the proprietary
10 information utility;

11 (d) mapping semi-structured proprietary information requests to a
12 most appropriate proprietary information model and application services
13 that will operate on the most appropriate proprietary information model ;
14 and,

15 (e) translating information from an author into a utility-native
16 proprietary information format that can be used by a least a subset of
17 application services within the proprietary information utility.

1 29. A method comprising the following steps:

2 (a) providing outside entities connection to information within a
3 proprietary information utility;

4 (b) storing proprietary information within a repository, wherein the
5 repository is compartmentalized by user identity and entitlement;

6 (c) limiting access of each user connecting to the proprietary
7 information utility to proprietary information to which each user is entitled,
8 the proprietary information to which each user is entitled being accessed
9 through use of application services operating within the proprietary
10 information utility; and,

11 (d) providing a service catalog, a discovery mechanism to provide a
12 custom view of available application services, based on entitlement and
13 visibility.